UNITED
NATIONS

TD

United Nations Conference
on Trade and Development

Distr.
GENERAL

TD/B/CN.1/IRON ORE/9
3 August 1993

Original: ENGLISH

TRADE AND DEVELOPMENT BOARD
Standing Committee on Commodities
Intergovernmental Group of Experts
on Iron Ore
Second session
Geneva, 25 October 1993
Item 5 of the provisional agenda

BIBLIOGRAPHY OF RELEVANT STUDIES ON IRON ORE

Annotated bibliography on iron ore - 1993

Prepared by the UNCTAD secretariat

GE.93-52888

CONTENTS

		Paragraphs
Introduction		1 - 2
PART I.	RELEVANT ACTIVITIES AND STUDIES OF INTERNATIONAL ORGANIZATIONS	
1.	UNCTAD	1
1.1	Commodities Division	3 - 5
1.2	Data Management Service	6 - 9
1.3	Services Division: Shipping	10 - 14
2.	OTHER UNITED NATIONS ORGANIZATIONS OR SPECIALIZED AGENCIES	15 - 39
2.1	Economic Commission for Africa (ECA)	15
2.2	Economic Commission for Europe (ECE)	16 - 23
2.3	Economic Commission for Latin America and the Caribbean (ECLAC)	24
2.4	Economic and Social Commission for Asia and the Pacific (ESCAP)	25
2.5	United Nations Division of Natural Resources and Energy, New York	26
2.6	United Nations Environment Programme (UNEP)	27 - 30
2.7	United Nations Development Programme (UNDP)	31
2.8	United Nations Industrial Development Organization (UNIDO)	32
2.9	International Trade Center UNCTAD/GATT (ITC)	33
2.10	International Labour Organization (ILO)	34 - 39

3. OTHER INTERNATIONAL ORGANIZATIONS..... 40 - 63

3.1 World Bank ..... 40 - 42

3.2 General Agreement on Tariffs and Trade (GATT)..... 43

3.3 Organization for Economic Cooperation and Development (OECD)..... 44 - 46

3.4 Commission of the European Economic Community (EEC)..... 47 - 50

3.5 European Free Trade Association (EFTA) 51

3.6 Commonwealth Secretariat..... 52

3.7 Common Fund for Commodities (CFC)..... 53

3.8 International Iron and Steel Institute (IISI)..... 54 - 56

3.9 Latin American Iron and Steel Institute (ILAFA)..... 57 - 59

3.10 South-East Asia Iron and Steel Institute (SEASI)..... 60

3.11 Arab Iron and Steel Union (AISU)..... 61

3.12 African Iron and Steel Association (AISA) 62

3.13 American Iron-Ore Association (AIOA)... 63

PART II. RELEVANT STUDIES AND PUBLICATIONS COMMUNICATED BY GOVERNMENTS 64 - 71

Bolivia 64

Canada 65

France 66

India ..... 67 - 68

Thailand 69

United States of America..... 70 - 71

PART III. SUMMARIES OF SPECIFIC TOPICS 72 - 76

A. Iron-ore mining capacity and investments..... 72 - 74

B. Demand and supply of iron ore and steel..... 75

C. Mining and environment..... 76

Annex

Directory of relevant international organizations

INTRODUCTION

1. This annotated bibliography contains summaries of relevant studies and/or information about the activities carried out by UNCTAD and other international organizations, as well as in individual countries, in the field of iron ore or related issues considered to be of interest to iron-ore producers and consumers. It covers the year 1992 and the first half of 1993.

2. The present document was prepared in response to the wish of the Intergovernmental Group of Experts on Iron Ore. The Group decided that the "Annotated bibliography on iron ore" should be regularly updated and that this subject should be maintained as a regular item on its agenda. For the preparation of this 1993 version of the bibliography, the UNCTAD secretariat requested all UNCTAD member States, as well as concerned international organizations, to provide copies of recent studies and any other relevant information on iron ore, iron and steel matters. The information provided herewith is based on the replies received as of 15 July 1993, and complemented with information and studies available in the UNCTAD secretariat.

Part I

RELEVANT ACTIVITIES AND STUDIES OF INTERNATIONAL ORGANIZATIONS

1. UNCTAD

1.1 Commodities Division

3. UNCTAD has been fulfilling its main role of strengthening international cooperation on iron-ore issues, through the work of the **Intergovernmental Group of Experts on Iron Ore (IGEIO)**. As the only study-group type of forum exclusively devoted to iron ore, since 1986 the IGEIO has been holding annual sessions attended by experts who are policy makers in government and industry from about forty countries, representing producers, consumers, traders, and relevant international organizations. The main purpose of the IGEIO is to provide a forum for a regular producer-consumer dialogue on iron-ore matters. Over the years, the Expert Group has been active in improving market transparency, reviewing and monitoring the market situation and outlook for iron ore, and facilitating closer cooperation through regular exchanges of views and information on issues of concern to the iron-ore industry worldwide. Participation in the IGEIO'sessions is open to representatives from all UNCTAD member countries and the participation of industry is highly encouraged. The annual sessions of the Expert Group are held for three days, normally in October, at the Palais des Nations in Geneva.

1.1.1 Review of the Current Market Situation and Outlook for Iron Ore - 1993

TD/B/CN.1/IRON ORE/8, Geneva, August 1993
For general distribution. Issued in the six United Nations official languages (Arabic, Chinese, English, French, Russian and Spanish).

4. This report describes developments which took place in the world iron-ore market during the previous year and the first half of the current year. It is used as a background document to facilitate a regular exchange of views between both iron-ore producing and consuming countries involved in the work of UNCTAD's Intergovernmental Group of Experts on Iron Ore. Featured are recent developments influencing demand for iron ore such as the production of steel, pig iron and direct reduced iron (DRI), the ferrous scrap market and iron-ore stock movements. The supply capacity at the regional and global levels, as well as the financing and investment plans of the iron-ore mining industry, are also dealt with. The report examines international trade issues relating to the volume and value of international trade, prices, freight rates and transportation costs for iron ore. Technological and environmental issues are also addressed, as well as the short-term outlook for the iron ore market.

1.1.2 Annotated Bibliography on Iron Ore - 1993

TD/B/CN.1/IRON ORE/9, Geneva, August 1993
For general distribution in all United Nations official languages.

5. The present bibliography is prepared annually for submission to UNCTAD's Intergovernmental Group of Experts on Iron Ore. Its main purpose is to inform iron-ore producers and consumers about studies and activities currently undertaken worldwide by international institutions and in individual countries.

1.2 Data Management Service

1.2.1 Iron-ore Statistics 1983-1992

TD/B/CN.1/IRON ORE/7, Geneva, July 1993
For general distribution in all United Nations official languages.

6. This compendium is issued under the UNCTAD regular statistical programme on minerals and metals. This publication has appeared annually since 1984, and provides detailed iron-ore statistics to complement the annual market review. The world statistical series covers the last 10 years and is based on the replies received from governments to the UNCTAD annual questionnaire on iron ore. It has 27 tables and includes data regarding production, consumption and trade of iron ore and ferrous metallics, as well as crude-steel production.

1.2.2 Trust Fund Project on Iron-Ore Information.

7. Following the suspension of activities of the Association of Iron Ore Exporting Countries (APEF) as of 1 June 1989, the governments of certain countries decided to establish a trust fund project on iron-ore information administrated by UNCTAD. The purpose was to continue the collection and dissemination of data relating to iron ore formerly undertaken by APEF. This project is currently financed by voluntary contributions from the governments of Australia, India, Japan, the United States and Venezuela, and the Commission of the European Economic Community, and by the revenues from the sale of publications. The donor governments will decide on the future of this project by February 1994. The following publications have been issued under this project:

- Iron-ore Statistics (July and October 1989,1990, 1991, 1992 and 1993). issued in English, French and Spanish.

- Market Report on Iron Ore (March 1990, 1991, 1992 and 1993). in English only.

1.2.3 Monthly Commodity Price Bulletin
Annual subscription 03600P - (ISSN 0251-6438)

8. This bulletin is issued monthly. An annual subscription is available, which also covers the occasional publication of a supplement. The explanatory notes, descriptions and sources are published in English, French and Spanish. The bulletin contains a historical series of monthly, quarterly and annual average prices for the current year and the past three years for all major commodities including minerals, ores and metals, among them, iron ore.

1.2.4 UNCTAD Commodity Yearbook - 1991

TD/B/C.1/STAT.8, Sales No. E/F.9II.D.9, Geneva, 1991
Bilingual publication : English/French.

9. This annual publication is intended to provide desegregated data at the world, regional and country levels for trade and consumption relative to

selected agricultural primary commodities and minerals, ores and metals, including iron ore. Basic tables are presented from both the commodity and the country point of view, to serve as background material to international commodity discussions and negotiations at UNCTAD. Governments, international organizations, universities and other research institutions with an interest in international commodity policy issues will find this publications to be of practical use.

1.3 Services Division: Shipping

10. In 1992 the UNCTAD Standing Committee on Developing Services Sectors was established, with a view to fostering competitive service sectors in developing countries. Priority continued to be given to the field of shipping. A new work programme is guiding the work of the Committee in this area in order to reflect general policy changes and structural adjustment processes that characterize the markets for maritime and related services. Specialized reports, technical-assistance projects and training activities, of possible interest to those involved in the seaborne trade of iron ore, will continue to be carried out, at least during the next for years. A selection of the most recent publications includes:

1.3.1 Review of Maritime Transport 1991

TD/B/CN.4/8, Sales No. E.9.II. D16, Geneva, September 1992
Available in all six official languages.

11. This annual report, usually issued in September, examines developments in international seaborne trade during the previous year. It identifies the major changes and trends observed in world maritime transport, and examines recent developments in the world fleet, shipbuilding, freight markets, and multimodal transport. Emphasis is given to the situation of the merchant marine in developing countries as compared with other groups of countries. The report also highlights the continued disparity between developing-country cargo generation and fleet ownership.

1.3.2 Industry and Policy Developments in World Shipping and Their Impact on Developing Countries

TD/B/CN.4/5, Geneva, July 1992
For general distribution in all United Nations official languages.

12. This report analyses industry developments in all sectors of maritime transport as well as changes in the shipping policy framework based on various national laws and multilateral agreements. It also identifies measures aimed at promoting the participation of developing countries by reducing the technology gap and adapting to new forms of transport organization.

1.3.3 Ship Finance for Developing Countries

UNCTAD/SHIP/642, Geneva, September 1992
For general distribution in all United Nations official languages.

13. The report examines the prevailing ship-financing arrangements and assesses their adequacy in meeting the requirements of developing countries. It

focuses on the types and sources of finance for acquisition of ships and analyses the ability to repay loans under selected financing terms at current freight rates. It points out that the erosion of the capital base of shipping enterprises during the depressed markets has given rise to additional ship-financing problems.

1.3.4 The Management and Development of Human Resources in Ports

UNCTAD/SHIP/644, Geneva, December 1992
For general distribution in English and French.

14. This document presents an overview of the port job structure with a view toward evaluating both qualitative and quantitative human-resource requirements, and proposes the implementation of a port human-resource development policy. The study forms part of a wider programme comprising many publications on the subject of ports.

2. OTHER UNITED NATIONS ORGANIZATIONS OR SPECIALIZED AGENCIES

2.1 Economic Commission for Africa (ECA)

15. Since the study, The iron ore industry in Africa during the 1980s and prospects for the 1990s, published in 1991 and already mentioned in that year's bibliography, no other publication or activity in the iron ore field had been undertaken by the ECA.

2.2 Economic Commission for Europe (ECE)

16. The United Nations Economic Commission for Europe organizes annual meetings, seminars and study tours, as well as undertaking studies in the field of iron and steel as part of the activities of its Working Party on Steel. From June 1992 to June 1993, its main studies and activities were:

2.2.1 The Steel Market in 1991

ECE/STEEL/78, Sales No. E/F/R.92.II.E.26, Geneva, 1992.
Available in English, French and Russian.

17. This publication covers steel developments in 1991. It presents an annual review of the steel market and the main factors conditioning the supply of and demand for steel products in Eastern and Western Europe, North and South America, Japan, Australia, China and most of the emerging steel-producing countries of the Middle and Far East. It describes past developments and prospects of the main macroeconomic trends, the main steel-consuming sectors, the steel trade and the main raw materials such as iron ore, scrap, coal, etc. The 1992 edition of this report is scheduled to be published in October 1993.

2.2.2 Steel Product Quality and Maximum Utilization of Scrap

ECE/STEEL/77, Sales No. E/F/R.92.II.E.25, Geneva, October 1992
Available in English, French and Russian.

18. The study, based on national monographs and material received from specialized institutes and organizations, presents the current situation and the major trends for the preparation of scrap, its utilization and consumption by the steel industry. The study surveys the interrelation between steel, scrap quality and the suitability of scrap for steelmaking. It also examines the maximum scrap utilization and the structure of scrap supplies, methods for preparing scrap, as well as the influence of scrap consumption and costs on steelmaking costs.

2.2.3 Iron and Steel Scrap: Its Significance on Further Developments in the Iron and Steel Industries

ECE/STEEL/74, Sales No. E/F/R.92.II.E.37, Fifth updating, Geneva, 1991
Available in English, French and Russian.

19. This study is based on material specifically collected from countries through questionnaires distributed every two years, and covers the main consumers of Western, Central and Eastern Europe, the former USSR, North and South America and Japan. It deals with the main trends in steelmaking processes relative to the consumption of the primary metals of steelmaking (scrap, pig iron and direct-reduced iron); the main trends in scrap availability divided between consumers' own resources and collection, in scrap preparation and quality; and draws conclusions concerning trends in scrap resources. Basic trends in scrap use by process and country are presented, along with an analysis of the scrap trade. Total scrap balances by country are given, in addition to outlooks and future trends for scrap resources and use. The study is complemented by 91 tables supporting the text.

20. Taking into account the importance of raw materials for the development of steelmaking, the ECE Working Party on Steel has started a new study on Problems Arising from the Use of Iron and Steel Scrap. This study will survey the main following points: patterns of supply of ferrous primary raw materials, estimated energy consumption in the various processes and new steelmaking processes, environmental aspects of scrap utilization in the different processes, the influence of the previous factors on trends in steelmaking in Eastern Europe and, more specifically, in some developing countries where, by definition, scrap has long been scarcer than in the industrialized countries. This study will be published in October 1993.

21. Statistics are also regularly published by the UN-ECE covering steel production, steel consumption and steel trade in the main steel-producing countries all over the world. The relevant publications are:

- Annual Bulletin of Steel Statistics;
- Statistics of World Trade in Steel (annually);
- Advance Statistics (quarterly).

2.2.4 Other ECE activities

22. A study tour of the steel industry of the Czech Slovak Republics was held from 6 to 12 June 1993. Participants visited the main steelworks of the two countries, where long products, stainless steels, and welded pipes and tubes are produced. A study tour of the Japanese steel industry will take place in the second half of 1994.

23. In 1993 the ECE organized the seminar on "Metallurgy and Ecology", held from 10 to 14 May in Nancy, France. The seminar focused on the current environmental problems faced by the iron and steel industry. About 130 participants and 45 technical papers were presented analysing different aspects of the entire steel process, ranging from manufacture and its associated problems of effluents, waste and recycling.

2.3 Economic Commission for Latin America and the Caribbean (ECLAC)

24. During the 1992-93 period, ECLAC has not carried out any study on iron ore or related matters. Nevertheless, ECLAC maintains close contatc with ILAFA (Latin American Iron and Steel Institute) whose headquarters are located in Santiago, Chile, aimed at following regional developments in this field.

2.4 Economic and Social Commission for Asia and the Pacific (ESCAP)

25. The ESCAP did not publish any material dealing with iron ore or iron and steel issues in 1992.

2.5 United Nations Division of Natural Resources and Energy, New York

26. No particular publication on iron ore or related issues was prepared by this Division in 1992.

2.6 United Nations Environment Programme - (UNEP)

27. The main objective of the Paris-based UNEP Industry and Environmental Programme Activity Center (IE/PAC) is to bring industry, governments and non-governmental organizations together to work towards environmentally-sound forms of industrial development. Its sectoral activities aim at providing comprehensive guidance for specific industrial sector in order to encourage improved environmental performance. Mining, iron and steel are among the main industrial sectors currently being addressed. The publications of particular relevance to this bibliography are:

Environmental Management and Cleaner Production in the Iron and Steel Industry

UNEP-IE/PAC, Paris, 1993

28. This paper was presented at the SEASI Conference on "Environmental Control and Energy Saving Practices within the Iron and Steel Industry", held in April 1993 in Sandai, Japan. It discusses the cleaner-production technologies in the iron and steel industry, highlights the need of management tools to support the cleaner production approach, and describes the UNEP's cleaner-production programme.

Environmental Aspects of Iron and Steel Production - A technical review

UNEP, technical review series, ISBN 92 807 1079 6, Paris, 1986
Available in English and French.

29. This report deals with the technical aspects of environmental management in steelmaking. It covers primarily the air and water pollution, solid-waste and noise problems associated with new integrated steel works based on the "classical production" route. It does not cover retrofitting of old plants and environmental aspects of ore mining and transportation, nor does it deal in detail with the direct reduction route to steelmaking, the subject of another publication. As this publication is nearly out of stock, an updated version will be published soon.

Guidelines for Environmental Management of Iron and Steel Works

UNEP, guidelines series, Sales No. E.86.III.D.8, Paris, 1986
English only.

30. This publication provides guidelines on ways of reducing the environmental impact of steelmaking. It is intended to assist policy makers and those involved in decisions on environmental issues. An evaluation of the major environmental problems is followed by a check list setting out points requiring attention, with each sector directly associated with a steel plant considered in depth. Actions which could be taken in developing policy and in adapting practices to local conditions are suggested.

2.7 United Nations Development Programme (UNDP)

31. UNDP has not published any particular study on iron ore or iron and steel during 1992 and so far in 1993. However some relevant projects concerning the iron-ore and steelmaking sector are currently financed by UNDP, as follows:

- Advisory services to assess conditions for launching the operations of the Société de Fer Congolais - FERCO;
- Assistance for a multi-purpose ore beneficiation plant in Pakistan;
- Establishment of a pilot and demonstration DRI plant in Zambia;
- Assistance for pilot and industrial-scale production of DRI in Vietnam;
- Assistance in reviewing and updating the masterplan on the prospects of the iron and steel industry in Thailand; and
- Assistance to the negotiation of the new complex for DRI and steelworks in Algeria.

2.8 United Nations Industrial Development Organization (UNIDO)

32. No studies or activities dealing specifically with iron ore were undertaken by UNIDO in 1992. Nevertheless, UNIDO continues to provide technical assistance to the development and strengthening of the iron and steel industries of developing countries. One of its objectives is to accelerate the exploitation and processing of local ore resources to yield higher value-added products for domestic consumption and exports. The Metallurgical Industries Branch has a well-distributed project portfolio covering all regions. Recently, emphasis has been given to energy conservation and environment-related projects for the iron and steel sector, particularly in Central and Eastern European countries. UNIDO is also co-operating closely with the South-East Asian Iron and Steel Institute -SEASI, as well as with the Latin American Iron and Steel Institute - ILAFA, in order to develop regional programmes on environment management and cleaner production for the iron and steel industry in Asia and Latin America, respectively.

2.9 International Trade Center UNCTAD/GATT (ITC)

33. ITC's present programmes do not include export development and promotion of iron ore. No activities in this field were undertaken in 1992 or are planned for 1993.

2.10 International Labour Organization (ILO)

34. As already reported last year, the twelfth session of the ILO Iron and Steel Committee was held in April 1992 in Geneva. Tripartite delegations representing governments, employers and workers from the 30 major developed and developing iron and steel producing countries participated in the session. The following reports were published:

2.10.1 Recent Developments in the Iron and Steel Industry

Report I, ILO, Geneva 1992 - ISBN 92-2-108125-7
Available in English, French and Spanish.

35. This report consists of three parts. Part I reviews some of the main events in the world iron and steel industry, including the impact of technological innovations on employment and changes in the age structure of the labour force, as well as wages and skill requirements. Part II consists of a summary of the information provided by 41 Governments concerning safety and health, the role of labour legislation and problems of freedom of association and trade- union rights. Part III gives details of the steps taken by the ILO to meet requests made at previous meetings, and also describes other ILO activities related to the iron and steel sector.

2.10.2 Training in the Iron and Steel Industry

Report II, ILO, Geneva 1992 - ISBN 92-2-108126-5
Available in English, French and Spanish.

36. This report examines various aspects of training, retraining and skill development in the iron and steel industry, as well as the role of governments, employers' and workers' organizations.

2.10.3 Note on the Proceedings of the Twelfth Session of the Iron and Steel Committee.

Doc. IC/IS/12/1992/20, Geneva, 1992
Available in English, French and Spanish.

37. This note is divided into four parts. Part I includes a summary of the general discussion at the session, centered upon future employment trends in the steel industry worldwide and the problems of the working environment, as well as a summary of opening and closing speeches. Part II covers vocational training, retraining and skill development in the iron and steel industry, and the role of governments, employers' and worker's organizations, together with the text of the conclusions on training issues adopted by the Committee. Parts 3 and 4 present the revised terms of reference of the Iron and Steel Committee, as well as the text of the six general resolutions adopted by the Committee.

The note concludes with a list of participants in the Twelfth Session of the Iron and Steel Committee.

2.10.4 Industry on the Move: Causes and Consequences of International Relocation in the Manufacturing Industry, ILO, Geneva, 1992

38. This report is the outcome of a research project on adjustment and structural change in manufacturing. It was carried out under the auspices of the ILO research programme on the International Division of Labour. It contains sections devoted to structural change in the steel industry in various countries and groups of countries, changes in international trade in steel, productivity and employment trends, etc. It also analyses the processes of structural adjustment in some downstream branches, e.g., the automotive industry, which are massive consumers of steel products.

39. A working paper entitled An Industry Steels Itself for Change: Restructuring the Iron and Steel Industry in Eastern Europe, was prepared within the framework of the ILO Sectoral Activities Programme and is currently in the process of publication.

3. OTHER INTERNATIONAL ORGANIZATIONS

3.1 World Bank

40. Publications issued by the World Bank during the first half of 1993 containing issues related to iron ore, iron and steel are as follows:

3.1.1 Quarterly Review of Commodities Markets
Washington, March 1993. Restricted distribution.

41. This paper is an office memorandum for external circulation prepared by the International Trade Division of the World Bank/International Finance Corporation. It briefly reviews market developments, including those for iron ore and steel, and presents a price index based on 33 non-fuel commodities.

3.1.2 Revision of Commodity Price Forecasts
Washington, March 1993. Restricted distribution.

42. This memorandum for external distribution presents a set of tables of the latest forecasts of primary commodity prices, including iron ore. Projections cover the period from 1993 to 2005.

3.2 General Agreement on Tariffs and Trade (GATT)

43. The GATT secretariat has not published any specific study on iron ore, neither on iron or steel. Its annual report, however, International Trade 1991-92, covers the iron and steel sector. Furthermore, under the framework of the market-access negotiations of the Uruguay Round, iron and steel are included in the list of additional natural resource-based products. The objective is to liberalize trade in those products by reducing or eliminating tariffs, tariff escalation and non-tariff measures.

3.3 Organization for Economic Cooperation and Development (OECD)

44. The OECD, through its Steel Committee, publishes two annual reports in the iron and steel field, the most recent ones are:

3.3.1 The Steel Market in 1992 and the Outlook for 1993

Sales No. ISBN 92-64-13930-3, Paris, July 1993
Available in English and French.

45. This report provides a detailed analysis of the steel market, pointing out the main features and market developments in the preceding year, as well as the outlook for the current and following year. It covers overall aspects related to steel supply, demand, trade and capacity, as well as developments in the steel market by area for both OECD and non-OECD countries. It also contains brief analyses and data regarding employment in the steel industry of the OECD countries.

3.3.2 The Iron and Steel Industry in 1991

Sales No. ISBN 92-64-03713-6, Paris, March 1993
Bilingual publication in English and French.

46. This annual report is basically a statistical compendium presenting about 30 tables containing data related to the iron and steel industry. Production, consumption and index prices of the raw materials used in iron and steel-making are also presented, mainly for iron ore, manganese ore, coke and ferrous scrap.

3.4 Commission of the European Economic Community (EEC)

47. The Commission of the European Communities did not publish any specific study on iron ore in 1992. However, the EEC's steel programme for the first half of 1993 briefly reviews market developments for steel-related raw materials which include iron ore, coke and scrap. In addition, the Commission research programme in the iron and steel field covers issues related to the preparation of raw materials, and in particular ore reduction.

48. The statistical office of the European Communities, EUROSTAT, located in Luxembourg, regularly publishes detailed statistical information on iron and steel for its 12 member countries. All the following publications are multi-language (seven languages) and can be purchased or obtained through subscription.

3.4.1 Iron and Steel Yearbook - 1992

49. This publication provides yearly statistics on structure and economic situation of the Community's iron and steel industry. It includes data on employment, size of enterprises, plants, crude steel, iron and scrap balances, production of iron ore, pig iron, crude and finished steel and products, consumption of raw materials, external trade in scrap, etc.

3.4.2 Iron and Steel Monthly - with Quarterly Supplement

50. This publication presents the European Coal and Steel Community (ECSC) steel situation at a glance, including a monthly production index for the Community's iron and steel industry, pig-iron production, production and trade of steel products, as well as consumption and receipt of scrap.

3.5 European Free Trade Association (EFTA)

51. The EFTA secretariat did not undertake any study or publish any report concerning iron ore in 1992. Its activities regarding iron ore have been limited to financial contributions to the work on "European Standardization for Iron and Steel" with standarization performed in close cooperation with the European Committee for Standardization (CEN).

3.6 Commonwealth Secretariat

52. In 1992/93, neither the Commonwealth secretariat nor the Commonwealth Fund for Technical Co-operation have undertaken any studies or issued any report on iron ore, iron or steel matters.

3.7 Common Fund for Commodities (CFC)

53. The Common Fund for Commodities started its operations as an international financial institution in 1989. It has a membership comprising 105 States and one regional economic integration group, namely the European Economic Community. Under its second account, the Fund may make loans and grants for financing development measures in the field of commodities aimed at improving the structural conditions in markets and enhancing the long-term competitiveness and prospects of particular commodities. One of the unique features of the Common Fund is that it finances projects sponsored by International Commodity Bodies (ICBs) which are commodity-focused rather than country-focused. Since its establishment the CF secretariat has not carried out any study or project related to iron ore and/or steel.

3.8 International Iron and Steel Institute (IISI)

54. The IISI is a non-governmental, non-profit research organization dealing with various aspects of the international steel industry, including its raw materials. IISI work is carried out through seven standing committees. More closely related to iron ore is the **Committee on Raw Materials** whose membership is composed of companies from 21 countries. During its latest annual meeting held in June 1993 in Brussels, Belgium, the Committee examined the short and medium-term prospects for steel-related commodities, including iron ore, and examined the results of a survey on world cokemaking capacity. **Future supplies of iron ore** will be the subject of the next study to be carried out by the Committee. A meeting of experts on this subject will be convened in 1993 to discuss the scope of the study and to prepare a questionnaire for collecting information on existing mining capacity, preparation and handling facilities, as well as on envisaged closures, expansions or new mines to be opened by the year 2000.

3.8.1 Steel Statistical Yearbook 1992
IISI, Brussels, 1992

55. The yearbook is a regular and well-known publication, but its 1992 version deserves to be pointed out. In addition to its basic world steel industry statistics on steel production, consumption, imports and exports, a new statistical series on the consumption of finished steel products was introduced, which gives a very clear view of both the development of steel demand and the industry's achievements in improving productivity. For a number of years the international organizations which compile steel figures, such as the IISI, OECD and UN-ECE, have been working together to develop a more realistic measure of steel consumption, since it has been generally felt that crude steel figures give a distorted picture of changes in the steel market.

3.8.2 Environmental Control in the Steel Industry
IISI, Brussels, 1992

56. This publication includes over forty papers originally prepared for the ENCOSTEEL Conference on Environmental Control in the Steel Industry, scheduled for April 1991 but canceled in the aftermath of the Gulf war. The study defines the environmental objectives for the steel industry and examines the progress made in reaching them. It also reports on achievements in waste management, air and water pollution control, and occupational health and safety in the steel industry.

3.9 Latin American Iron and Steel Institute (ILAFA)

57. ILAFA remains the most important institution for promoting the iron and steel industry in Latin America. Among its major activities is the Annual Congress of the Latin American Iron and Steel Industry. In 1992, the Congress was held in November in Caracas, Venezuela; in 1993, it is scheduled to take place from 25-28 October in Buenos Aires, Argentina. ILAFA also organizes technical seminars, undertakes major studies and regularly publishes detailed statistics on the Latin American iron ore, iron and steel industry. In addition to Siderurgia Latinoamericana, the monthly technical review of ILAFA, its most recent publications were:

3.9.1 The Latin American Iron and Steel Industry in 1991/92 and Its Prospects

ILAFA, Santiago, 1992
Bilingual: Spanish and English.

58. This annual study analyses the main world economic developments, the situation in each Latin American country, and links with the regional iron and steel industry as regards production, trade, investments and the overall world market situation.

3.9.2 Statistical Yearbook of Steelmaking and Iron Ore Mining in Latin America - 1992, Santiago, April 1993
Bilingual: Spanish and English.

59. This annual publication is now also available on diskettes. The latest edition presents statistical series for the period 1981-1992 for Latin American countries on production and exports of iron ore, steel production by processes, exports and imports of steel products by origin and destination, steel prices and the consumption of steel products and investments made by the Latin American iron and steel industry.

3.10 South-East Asia Iron and Steel Institute (SEASI)

60. SEASI organizes conferences, seminars and study tours in the region and also provides information services to its members. It publishes monthly newsletters, quarterly journals and an annual directory. The proceedings and technical papers presented at conferences and seminars are also usually published. In 1993, the SEASI Annual Conference was held in April in Sandai, Japan, focusing on "Environmental control and energy-saving practices within the iron and steel industry".

3.11 Arab Iron and Steel Union (AISU)

61. AISU's main objective is to facilitate close and effective cooperation between its member countries with a view to furthering the development of the iron and steel industry in the Arab countries. To this end, AISU organizes congresses and seminars on technical steel issues. The Fourth AISU International Iron & Steel Congress was held in October 1992 in Marrakech, Morocco, under the theme **Promotion of joint Arab ventures**; its proceedings, including the 23 papers presented, are now for sale. AISU publishes a monthly review, Arab Steel, with technical papers from the various seminar and other relevant articles. Its documentation centre also issues a monthly Steel Information Service, summarizing world steel news for its members.

3.12 African Iron and Steel Association (AISA)

62. This newborn association was created in December 1991, following a recommendation by, and with assistance from, UNIDO. The African Iron and Steel Association is expected to contribute to the implementation of the Lagos plan of action, elaborated under the "Industrial Decade for Development in Africa" and the "Priority Programme for African Economic Revival". At its Constitutive Assembly held in Algiers, government and industry representatives from Algeria, Angola, Congo, Ethiopia, Ghana, Mali, Mauritania, Nigeria, Senegal, Togo, Tunisia, Zambia and Zimbabwe agreed on the statutes of the Association. The headquarters of AISA is in Nigeria, where the first General Assembly apparently took place in November 1992 to elect its Secretary-General.

3.13 American Iron-Ore Association (AIOA)

63. This Association, which represents the iron-ore industry of Canada and the United States, does not publish studies or articles on iron ore. However, the AIOA issues a comprehensive collection of detailed iron-ore statistics regarding the iron ore industry in Canada and the United States. The most recent issue in this series is Iron Ore 1992, Ohio, United States, July, 1993.

Part II

RELEVANT STUDIES AND PUBLICATIONS COMMUNICATED BY GOVERNMENTS

Bolivia

64. The Government of Bolivia informed that the **"III Meeting of Latin American Ministers of Mines"** was held from 14 to 19 May 1993 in La Paz, Bolivia. It also provided a summary of recent studies published by the Documentation Center of the Bolivian Ministry of Mining and Metallurgy. The document includes a preliminary study on the reserves, mining and concentration plants for the Changolla iron-ore deposit located in Cochabamba, as well as a Master Plan for the development of the iron and steel industry in Bolivia. A number of studies and proposals for the exploitation of the Mutum deposits are being examined, and studies have been carried out to consider the possibility of building a mineral-metallurgical complex in Mutum to develop the region.

Canada

65. The Canada Energy, Mines and Resources published an iron-ore statistical document entitled "Iron-Ore Industry Statistics 1990 and 1991". This report is a continuation of the Canadian Iron-Ore Industry Statistics series published from 1955 through 1970. The statistical data, when used in conjunction with the Iron Ore chapter of the Canadian Minerals Yearbook, present a comprehensive review of the iron-ore industry for 1991 and 1990. The 1992 edition of this document is expected to be published shortly.

France

66. The third edition of a technical glossary (in frech only) on iron and steel containing 800 pages, 12,000 words or expressions, and 665 bibliographic references mostly related to blast-furnace operations, entitled "Le Savoir...Fer" was published in 1992 by the Association Le Savoir...Fer with the collaboration of the Usinor-Sacilor Group.

India

67. The Society of Geoscientists and Allied Technologists, in collaboration with the Ministry of Steel and Planning Commission of India, organized an international seminar on **Iron Ore 2000 and Beyond**, which was held at Bhubaneswar, India on January 30-31 1993. Almost 200 delegates from India and abroad participated in this meeting. The topics addressed during the seminar included geology, exploration and iron-ore resources; developments in mining, processing and beneficiation; demand, availability and production of iron ore in the context of changing scenarios for the iron and steel industry and export; environmental considerations; infrastructure; international collaboration and trade; and policy issues, fiscal matters, incentives and economic considerations. A summary of proceedings of the seminar was published describing the discussions held in the technical sessions and their recommendations.

68. The Federation of Indian Mineral Industries, which represents the Indian mining industry both in public and private sectors, organized an international seminar on the **Mineral Sector in India**. The seminar was held from 11 to 13

February 1993 at Hyderabad, India. Among the issues discussed were the recent advances in mineral exploration techniques and their application in India; the performance of small mines and their foreign collaboration; and the production of value-added concentrates, metals, alloys and mineral-based products in India and their future outlook for foreign joint-ventures with a view toward expanding the exports of value-added mineral products from India.

Thailand

69. The Department of Mineral Resources of Thailand provided some statistical information regarding the performance of the iron and steel industry in his country.

United States of America

70. The 1991 issue of the Iron ore - Annual Report was published in April 1993 by the United States Department of the Interior, Bureau of Mines. While focusing on recent developments in the iron-ore industry in the United States, including its structure, legislation, etc., this study also presents a detailed analysis of the major factors influencing the world iron-ore market in 1991.

71. The U.S. Bureau of Mines recently published two other reports dealing at least in part with iron ore and iron and steel matters: Metal Prices in the United States through 1991 includes chapters on iron ore, iron and steel scrap and iron and steel; and The Mineral Economy of Mexico contains a section on the iron-ore and steel sectors of that country.

Part III

SUMMARIES OF SPECIFIC TOPICS

A. Iron-ore mining capacity and investments

72. UNCTAD's report "Review of the Current Market Situation and Outlook for Iron Ore - 1993" notes that despite the recessive scenario of 1992-93, followed by weak demand and dwindling prices, the world iron-ore industry is going ahead with planned investments. Even if mining-investment strategies are based on a more favourable long-term perspective, the report highlights the risks involved in such investments and the attention required to keep a close supply/demand market balance. It is also pointed out that the boom in China and the growing iron-ore demand by developing Asian countries are currently used by the market to justify sizable investments. In a long run, however, this regional demand may not be sufficient to counterbalance the structural declining demand from traditional markets and the cumulative impact of the shrinking market in Eastern Europe.

73. Worldwide, the capacity utilization of the iron-ore industry in 1992 is roughly estimated at 80 percent. According to the UNCTAD annual survey on world iron-ore mining capacity, some 26 projects involving investments of around US 5.6 billion dollars are currently being developed. Expansions are taking place in Australia, Brazil, China, Chile, India, Iran, Mauritania, Sweden and Venezuela, with reductions in supply capacity occurring in Canada, CIS, France and Liberia.

74. The Iron Ore- Annual Report of the United States Bureau of Mines, although it does not list iron-ore production capacity for individual mines, presents a very informative survey in a table showing the principal iron-ore mines in 1991 by country, company, mine and type of ore. As regards pellets, the Bureau undertakes an annual monitoring of world pelletizing capacity; the most recent information is displayed in Table 1 below.

B. Demand and supply of iron ore and steel

75. Twice a year the Committee on Economic Studies of the **International Iron and Steel Institute** reviews the short-term and long-term outlook for steel demand. The most recent IISI projections for steel demand up to the year 2000 for steel products and crude steel, are presented in Tables 2 and 3 below.

C. Mining and environment

76. An international conference on **Development, Environment and Mining**, co-sponsored by UNCTAD, the World Bank, UNEP, and the International Council on Metals and the Environment (ICME), will take place in Washington, USA, in June 1994. Under the guidance of leading experts, participants will be involved in conference sessions that examine key questions of development and environment, in particular, the relationship of mining and metallurgy to sustainable-development policies.

Table 1
Iron ore: World pelletizing capacity, by continent and country

	Number			Rate capacity (million metric tons) gross weight)
	Sites	Plants	Units	
North America:				
Canada	5	6	13	26.44
Mexico	5	6	6	9.50
United States	10	18	50	66.55
Total	**20**	**30**	**69**	**102.49**
South America:				
Argentina	1	1	4	1.00
Brazil	3	8	8	24.30
Chile	1	1	1	4.00
Peru	1	2	2	3.20
Venezuela	1	1	2	6.60
Total	**7**	**13**	**17**	**39.10**
Europe:				
Belgium-Luxembourg	1	1	1	.80
Czechoslovakia	1	1	1	.25
Netherlands	1	1	1	3.80
Norway	2	3	3	3.20
Sweden	3	3	4	10.40
Turkey	1	1	1	1.30
USSR (former)	7	13	NA	80.00
Yugoslavia (former)	1	1	1	.60
Total	**17**	**24**	**NA**	**100.35**
Africa:				
Liberia	1	1	1	3.00
Morocco	1	1	1	.85
Nigeria	1	1	1	1.45
South Africa	1	1	1	.60
Total	**4**	**4**	**4**	**5.90**
Asia:				
Bahrain	1	1	1	4.00
China	4	4	NA	2.50
India	1	1	1	2.00
Iran (Islamic Rep. of)	1	1	1	2.50
Japan	1	2	2	4.40
Total	**8**	**9**	**NA**	**15.40**
Oceania:				
Australia	2	2	6	4.00
WORLD TOTAL	**58**	**82**	**NA**	**267.24**

NA = Not available
Source: Annual Report 1991 - Iron Ore, US Bureau of Mines, 1993.

Table 2
Apparent Steel Consumption
(million metric tons of steel products)

	1990	1995	2000
Industrialized countries	335.0	334	336
Developing countries	109.5	139	164
Western World	444.5	473	500
Former USSR & E.Europe	148.5	100	100
China	54.9	70	80
Other CPE countries	6.0	6	6
Total	**653.9**	**649**	**686**

Source: IISI, March 1993.

Table 3
Apparent Steel Consumption
(million metric tons of crude steel)

	1990	1995	2000
Industrialized countries	375.0	373	375
Developing countries	127.0	161	190
Western World	502.0	534	565
Former USSR & E.Europe	187.0	126	126
China	69.0	88	101
Other CPE countries	7	7	7
Total	**765**	**755**	**799**

Source: IISI, March 1993.

Annex

DIRECTORY OF RELEVANT INTERNATIONAL ORGANIZATIONS

For inquiries and acquisition of the publications listed in this bibliography, please contact the appropriate organization directly:

* **UNCTAD**
Palais des Nations
1211 Geneva 10
Switzerland
Tel: (4122)9071234/9171234
Telex: 412962 - UNATIONS
Fax: (4122) 907-0057

* **UN ECONOMIC COMMISSION FOR EUROPE - ECE**
Palais des Nations
1211 Geneva 10
Switzerland
Tel: (4122)9071234/9171234
Telex: 412962 - UNATIONS
Fax: (4122) 917-0123

* **UN ECONOMIC COMMISSION FOR AFRICA - ECA**
Africa Hall - P.O. Box 3001
Addis Ababa
Ethiopia
Tel: 447000/447200
Cable: ECA, Addis Ababa
Fax: (2511) 514416

* **UN ECONOMIC COMMISSION FOR ASIA AND THE PACIFIC - ESCAP**
The United Nations Building
Rajadamnern Av.
Bangkok 10200
Thailand
Tel: 2829161-200
2829381-389
Telex: 82392 ESCAP
Cable: ESCAP

* **UN ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN - ECLAC**
Casilla 79 D
Santiago
Chile
Tel: 48-5051
Telex: 340295/441054
Cable: UNATIONS

* **UNITED NATIONS**
Division of Natural Resources
United Nations
N.Y. 10017
U.S.A.
Tel: 212-963-8792
Cable: UNATIONS, NEW YORK

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION - UNIDO
Vienna International Center
P.O. Box 300
A-1400, Vienna
Austria
Tel: 211-310
Telex: 135612
Fax: 232156

INTERNATIONAL LABOUR OFFICE - ILO
4, route des Morillons
CH-1211 Geneva 22
Switzerland
Tel: 22-7996111
Telex: 415647
Fax: 22-798-8685

---

* United Nations publications may be obtained from bookstores and distributors throughout the world. Consult your bookstore or write to: United Nations, Sales or Distribution Section, New York or Geneva.

THE WORLD BANK
1818 H Street, N.W. Tel: 202-477-1234
Washington, DC 20433 Telex: WUI 64145
U.S.A. RCA 248 423

GATT
Center William Rappard Tel: 739-5111
1211 Geneva 21 Telex: 412324 GATT
Switzerland Fax: 022-7314206

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT- OECD
2, rue André-Pascal Tel: 45.248200
75775 Paris Cedex 16 Telex: 620160
France Fax: (33-1) 45248500

COMMISSION OF THE EUROPEAN COMMUNITIES - CEE
Rue de la Loi 200 Tel: 295-1111
B-1049 Brussels Telex: B21877
Belgium Cable: COMEUR Brussels

COMMONWEALTH SECRETARIAT
Marlborough House - Pall Mall
London SW1Y 54X
U.K.

COMMON FUND FOR COMMODITIES
Willemshuis, Stadhouderskade 55 Tel: (3120)66 46409
1072 AB Amsterdam Telex: 12331 cfc nl
The Netherlands Fax: (3120) 67 60231

EUROPEAN FREE TRADE ASSOCIATION - EFTA
9-11 Rue de Varembé Tel: (4122)749-1111
CH-1211 - Geneva 20 Telex: 22660 EFTA
Switzerland Fax: (4122)733-9291

INTERNATIONAL IRON & STEEL INSTITUTE - IISI
Rue Col. Bourg, 120 Tel: 735-9075
B-1140 Brussels Telex: 22639
Belgium Fax: 735.8012

LATIN AMERICA IRON & STEEL INSTITUTE - ILAFA
Casilla 16065 Tel: 22.37581
Santiago 9 Telex: 340348
Chile Fax: (56-2)2253111

SOUTH-EAST ASIA IRON & STEEL INSTITUTE - SEASI
P.O. Box 7094 Tel: (603) 559 1102
40702 Shah Alam Telex:
Selanga Darul Ehsan Fax: (603) 559 1159
Malaysia

ARAB IRON & STEEL UNION - AISU
P.O. Box 4 Tel: 36-2704/06
Chfrage - Algiers Telex: 63158
Algeria Fax: 37.1975

AMERICAN IRON ORE ASSOCIATION - AIOA
614 Superior Av., N.W. Tel: (216)241-8261
915 Rockefeller Building Fax: (216)241-8262
Cleveland, Ohio 44113-1306
U.S.A.